

River Flood Risk Increasing Transition to Wetter Weather This Weekend



15<mark>.00</mark> 10.00

7.00

5.00

4.00 3.00 2.50

2.00

h .75

1.50 1.25

1.00 0.75

0.50 0.25 0.10 0.01

Click Here for the Latest 7-day Forecast Rainfall Graphic

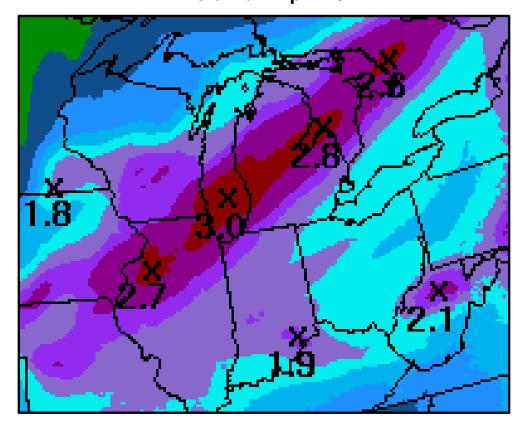
Total Rain Forecast: April 10-17

As of 7am April 10

More than 2 inches of Rain Likely to result in Minor Flooding, Some Moderate Flooding Possible

Any Minor and Moderate Flooding Will Continue through Next Week

Additional Rainfall Possible Late Next Week





Outlook for the Next Week Transition to Wetter Weather This Weekend



20.00 15.00

10.00

7.00

5.00 4.00

3.00

2.50

2.00

h .75

H .50

1 .25

d .00

0.75 0.50 0.25 0.10 0.01

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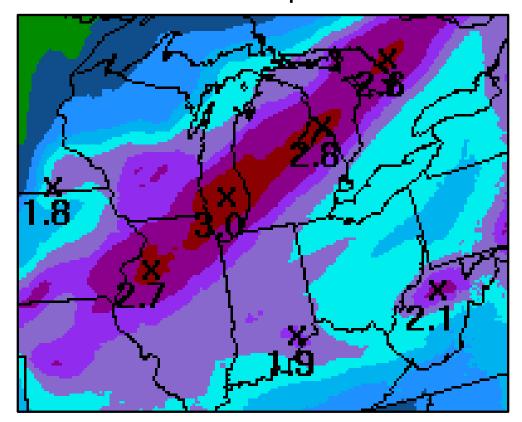
Total Rain Forecast: April 10-17

As of 7am April 10

River Basins At Risk for Heaviest Rainfall Include

(As of April 10)

Muskegon River
Rifle River
Grand River
Saginaw River
Kalamazoo River
Pine River
Shiawassee River
Tittabawassee River

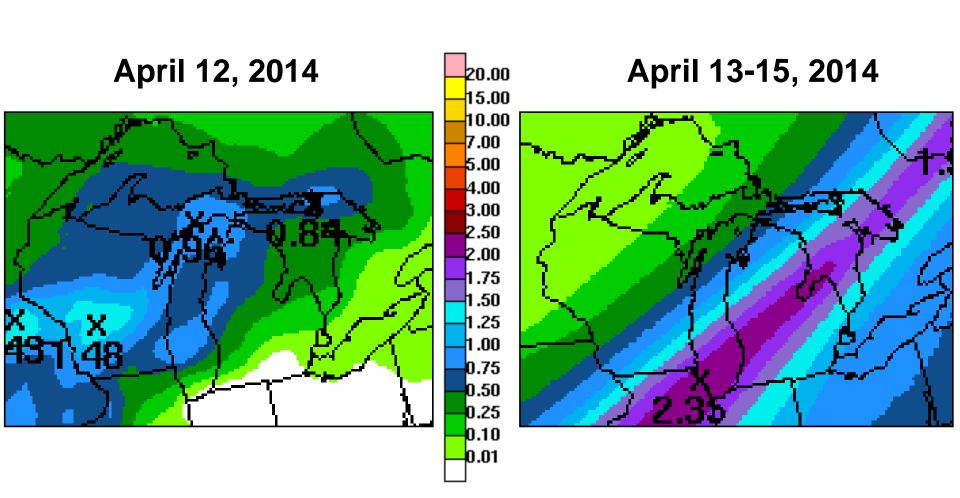




Rain Likely into Next Week April 12-15



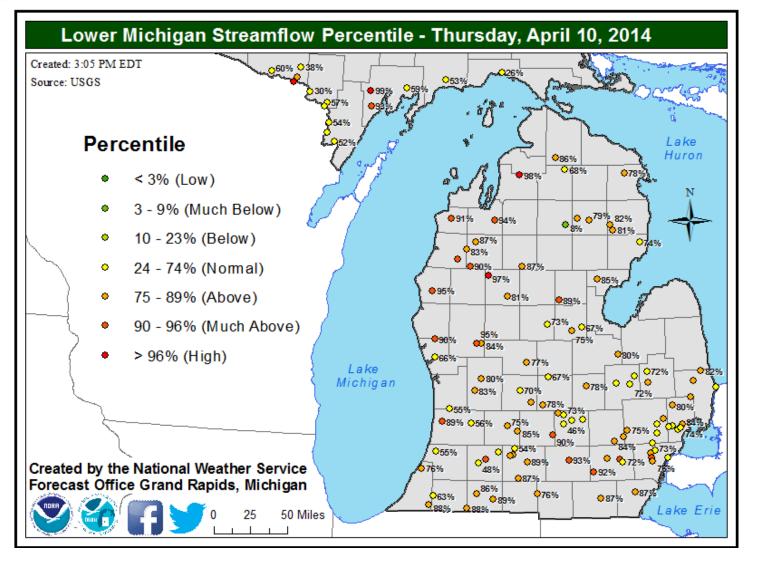
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River Levels Compared to Past Years Most Rivers Currently At or Above Normal







Flood Terminology



Major Flooding

Extensive Inundation - Road, Structure, Communities
Evacuations
Movement of Property to Higher Elevations

Moderate Flooding

Some Inundation - Road, Structure, Communities
Possible Evacuations
Movement of Property to Higher Elevations

Minor Flooding

Minimal Property Damage, Public Inconvenience



Best and Worst Case Scenarios



Best Case - Would Help Lessen Flood Threat If...

- Spaced Out Smaller Rainfall Events Allowing Drainage to Occur
- Aviod Heavy Rainfall Events that occur over all Michigan
- Slow Melt in northern Lower and Upper Peninsula

Worst Case - Would Increase Flood Threat If...

- Significant Intense Rainfall Happens at Once or Multiple Times (like April 2013)
- Heavy Rainfall Occurs Across Entire Basins especially the Headwaters
- Rapid Melting from Long Stretches of Warm Days in northern Lower and U.P.
- Heavy Rain Over Places With Snow on the Ground



Keep in Mind



Ground Will Not Absorb Much Water – if any at all

Snowpack in northern Lower and U.P Will Not Absorb Much Rain at all from now on

Ice Remains an Unpredictable Factor for Flooding Up North

Many Rivers are near to above Bank Full Over an inch of rain in a short period of time could lead to Minor Flooding.

More than an inch of rain multiple times in quick succession or two or more inches at one time could mean Moderate flooding



Water in the Snow Pack This Month compared to Last Month



Modeled Snow Water Equivalent

Upper Peninsula Water in the Snow Pack Remains Well Above Normal Far Northern Lower Still Above Normal As Well

Inches of water

equivalent

April 10, 2014

Houghton Manistique

March 14, 2014

